

REMARKS

The instant Amendment A is responsive to the Office Action mailed March 28, 2005. Applicants respectfully submit that claims 2-18, 29, and 30 as set forth herein patentably distinguish over the references of record, and accordingly respectfully ask for allowance of claims 2-18, 29, and 30 as set forth herein.

The current status of the claims

The Office Action mailed March 28, 2005 indicates that claims 1-18 are pending in the application. Applicants believe that claims 1-28 should be pending with claims 19-28 being withdrawn, rather than canceled. See MPEP § 821. However, Applicants cancel claims 19-28 herein.

Claims 1, 2, 16, and 17 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Camras et al. (U.S. Patent No. 6,784,463, hereinafter "Camras").

Claims 3-8 and 10-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Camras in view of Sawayama et al. (U.S. Patent No. 6,788,366, hereinafter "Sawayama").

Claim 9 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Camras and Sawayama in further view of Ramdani et al. (U.S. Patent No. 5,838,707, hereinafter "Ramdani").

Claim 13 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Camras and Sawayama in further view of Chua et al. (U.S. Patent No. 6,455,340, hereinafter "Ramdani").

Claims 14, 15, and 18 are indicated as containing allowable subject matter.

Claims 19-28 are canceled herein

Applicants cancel claims 19-28. However, Applicants reserve the right to prosecute these claims in a subsequent continuation, divisional, or other application claiming priority to the present application.

Claims 14 and 18, which were indicated as containing allowable subject matter, are placed into independent form

Claims 14 and 18, which were indicated as containing allowable subject matter, are placed into independent form.

It is respectfully submitted that claims 14 and 18, as well as claim 15 that depends from claim 14, are in condition for allowance. Accordingly, Applicants respectfully request allowance of claims 14, 15, and 18.

Claim 3 has been placed into independent form, and distinguishes over the cited references

Claim 3 has been placed into independent form.

Claim 3 stands rejected based on a proposed combination of Camras and Sawayama. The Office Action acknowledges at p. 4 that Camras does not disclose a light-transmissive dielectric layer laterally interspersed with electrical connecting material, and proposes to modify Camras with Sawayama to provide this feature.

First, Sawayama relates to a LCD display, not to a semiconductor device. The layer (30) is a scattering-type liquid crystal (see at least col. 8 lines 46-47). This is non-analogous art, and would not be referenced by the skilled artisan to develop a new design for a reflective electrode for a semiconductor.

Second, Applicants find no indication that the dielectric layer (5c) is light-transmissive, as called for in claim 3. Indeed, there is no need in Sawayama for dielectric layer (5c) to be light-transmissive. The dielectric layer (5c) provides a corner cube array (10) morphology for the multiple reflective electrodes (12) formed of reflective metallic layers disposed on the dielectric layer (5c). The reflective electrodes (12) are opaque (the reflective metal layers have thicknesses of 100nm or higher). See Sawayama col. 8 line 40 through col. 9 line 1. Most of the dielectric film (5c) is covered by the opaque metal layers of the reflective electrodes (12), so that the light does not reach the dielectric film (5c). In the small gaps (16) which provide electrical isolation for neighboring electrodes (12), the refractive index difference between the dielectric film (5c) and the liquid crystal layer (30) is so slight that light is substantially not reflected, so that the gaps (16) define non-reflecting regions. See Sawayama col. 9 lines 1-8.

Third, even if the skilled artisan referenced both the Camras reference and the non-analogous Sawayama reference, and interpreted the dielectric layer (5c) as being light-transmissive, the skilled artisan still would not be motivated to make the proposed

combination. The Office Action states at p. 4 that the skilled artisan would be motivated to make the combination in order to have a light-transmissive dielectric layer laterally interspersed with the electrical connecting material to protect the reflective electrode.

However, the light-transmissive dielectric layer does not serve to protect the reflective electrode – rather, it is part of the reflective electrode. Thus, the alleged advantage cannot motivate the skilled artisan to make the proposed modification.

As described at least at page 9 lines 1-14 of the present application, by having electrical connecting material disposed over portions of the device mesa and a light-transmissive dielectric layer laterally interspersed with the electrical connecting material, the regions of high interface-defect-density contact between the electrical connecting material and the semiconductor are reduced, thus increasing light emission efficiency. Nothing in either Camras or Sawayama would suggest to the skilled artisan this motivation, or any other motivation, for interspersing a light-transmissive dielectric layer with electrical connecting material in a reflective electrode for a semiconductor.

It is therefore respectfully submitted that claim 3, as well as claims 2, 4-13, 16, and 17 that depend from claim 3, are in condition for allowance. Accordingly, Applicants respectfully request allowance of claims 2-13, 16, and 17.

New claims 29 and 30 patentably distinguish over the cited references

New claim 29 is similar to claim 3, and the remarks favoring patentability pertaining to claim 3 are applicable to new claim 29 as well. Claim 29 omits the limitation of claim 3 that the reflective electrode have laterally periodic reflectivity modulations. Based on the foregoing remarks setting forth bases for patentability of claim 3, it is respectfully submitted that these bases for patentability do not require the limitation that the reflective electrode have laterally periodic reflectivity modulations.

Accordingly, it is respectfully submitted that claims 29 and 30 are in condition for allowance. Accordingly, Applicants respectfully request allowance of claims 29 and 30.

CONCLUSION

For the reasons set forth above, it is submitted that claims 2-18, 29, and 30 as set forth herein patentably distinguish over the references of record. Accordingly, an early indication of allowance of claims 2-18, 29, and 30 as set forth herein is earnestly solicited.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he/she is hereby authorized to call the undersigned at Telephone Number (216) 861-5582.

Respectfully submitted,

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Date

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